

Title: Modified Barley α -Glucosidase
Inventor(s): Henson/Muslin/Clark
Application No.:
Docket Number: 960296.97486

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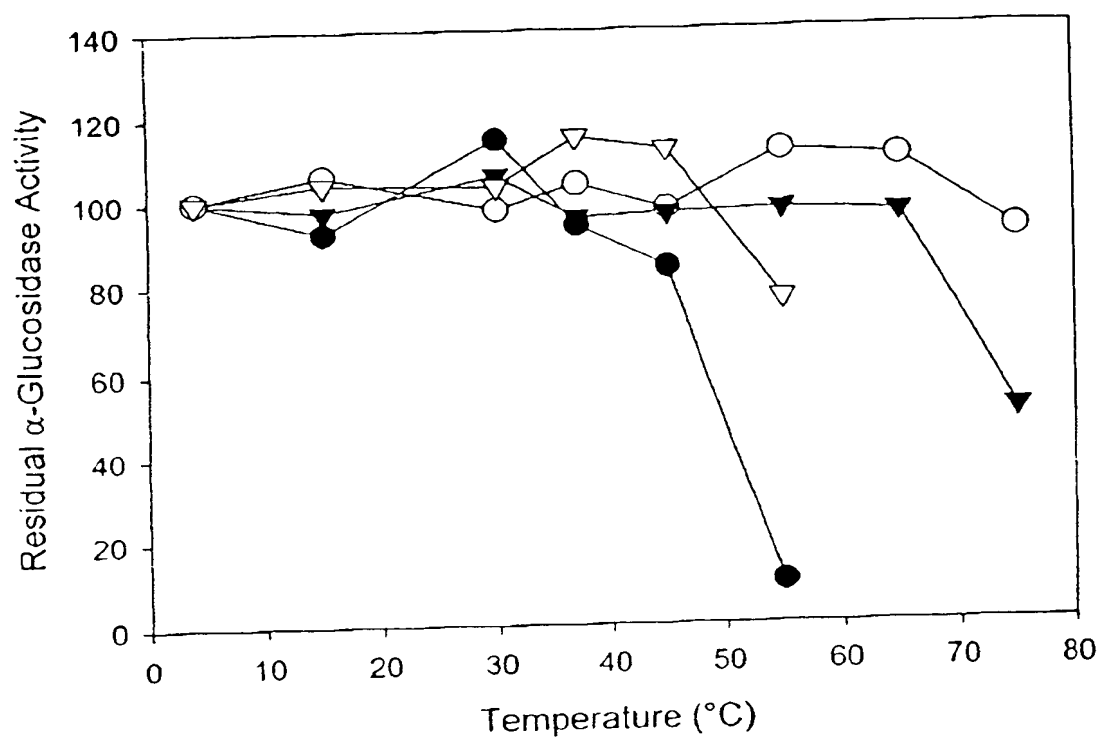


FIG 1

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EARLEY	MA-----TVGV-----LLCLCLCLFAPRLCSSKEECFLAAR---	(32)
S. BEET	Me-----rskipryicptlawvLpLvLCmvvegattSKndrqqeAigy9	(44)
SPINACH	Mkkk:pslalCi-----LLvfllyqVvAgistcSendpeuvigy---	(39)
ARABID.	Ms-----slhwfpnif----lvvvffleLrassqvleeEEstvvgy---	(37)
BARLEY	-----TVLAVAVTMEG-----ALRAEAATCGRSSTG-----DVQRLAVY	(66)
S. BEET	yqvkakvndstgkel-----tallqlirnsppvyp-----DihfLsft	(83)
SPINACH	-----gykvksVkvds-----gtRrsLcalpqlvknssvygpd:QlLelt	(78)
ARABID.	-----gyvrvvgvdsnrqvtakldlkpsvyp-----DiksLnlnh	(76)
BARLEY	ASLETDSRLRVITDADHPRWEVPQDIIPRPAPGD-----VLHDAPPA	(109)
S. BEET	ASfEeDdtLRlRfTDAnnRWE:FnvvlFPpPppppplslqlhlpkPi	(133)
SPINACH	ASLEsndRLRVITDAKlRWEiPdnlInrhqPpp-----ppphals	(121)
ARABID.	VSLETeeRLRiRITDssqqrWEiPctvIPRagnhs-----prifstee	(119)
BARLEY	S-----S-----APLQCRVLSPAGSDLVLTV-H-ASPFRFTVSRSTGDT	(147)
S. BEET	p-----q-----ngptcttVLSphsDLafTlfH-ttFFgFTlyRksThDv	(172)
SPINACH	lyrtllspt--tnrxkillshpnsDLcfel-inttPFgFTISRksThDv	(168)
ARABID.	d-----ggnsPennfladPsedlvftlh-n-ttFFgPsVSRSeGDi	(159)
BARLEY	LFDTAPG-----L-----VFRDKYLEVTSALPAGRASLYGLGEHTK	(183)
S. BEET	LFDatPipenpttfl-----iykDqYLqlsSeLPaqcAnlyGLGEHTK	(215)
SPINACH	LFDatPdptnpttfl-----iFidqYLhltTsLfgtRAhiYGLGEHsK	(211)
ARABID.	LFDTsPd-----sdsntcyfiFkDqfLqlsSALPenRsnLYGiGEHTK	(202)
BARLEY	SSFRLRHNDSTLWNADICASYVDVNLVYGSHPFFYMDVRAP-----GTAH	(227)
S. BEET	ptFqLaHNgiltLWNADIASfnrdINLYGSHPFFYMDVRsspmv-----GstH	(262)
SPINACH	ptFqLaHNgiltLWNADIPsSnrdVNLVYGSHPFFYMDVRsspmv-----GstH	(258)
ARABID.	rsFRLlpggetmLWNADtGsenpDVNLVYGSHPFFYMDVRgskoneeaGtH	(252)
BARLEY	GVLLSSNGMDVLYGGSYVITYKVIGGVLDYFFAGSNFLAVVDQYTQLIA	(277)
S. BEET	GVLLLnSNGMDVeytGdrITYKVIGGiDLYIFAGrtPemVLDQYtKLlg	(312)
SPINACH	GVLLLnSNGMDVeytGdrITYKVIGGiDLYIFAGrtPqgVVeGftT:Vlg	(308)
ARABID.	GVLLLnSNGMDVkyeChritYnVIGGVldLYVFAGssPemVmnQYtELlg	(302)
BARLEY	RPAPMPYWSFGFHQCRYGYLVNSDLERVVARYAKARI:PLEVMWTDIDYMD	(327)
S. BEET	RPAPMPYwaFGFHQCRYGYLVNSDLERVVARYAKARI:PLEVMWTDIDYMD	(362)
SPINACH	RPAPMPYwaFGFHQCRYGYLVNSDLERVVARYAKARI:PLEVMWTDIDYMD	(358)
ARABID.	RPAPMPYWSFGFHQCRYGYLVNSDLERVVARYAKARI:PLEVMWTDIDYMD	(352)
BARLEY	GFKDFTLDRVNFIAAE:LRFFVDRLHRNAQKYVLILDPGIRVDPICATYGT	(377)
S. BEET	aFKDFTLDPVhFpldkmqgFvckIHRNgQrYVpILDPGI---ntnksYGT	(409)
SPINACH	ayKDFTLDPVNFpldkmkfVnnLHKNgQrYVpILDPGI---stnktYeT	(405)
ARABID.	GyKDFTLDPVNFpedkmqgFVDtLHKNgQrYVpILDPGI---gvDssYGT	(399)
BARLEY	FVRGMQODIFLKRNGTNEFVGNVWPGDVYFFDFMHFAAAEFWAREISLFRR	(427)
S. BEET	FVRGMQsnvFiKRNGpylGsvWPGpVYyFDFldFAArefWvdEIkrfRd	(459)
SPINACH	yVRGMkhdvFLKRNGkpylGsvWPGpVYyFDFldFAArefWvdEIkrfRd	(455)
ARABID.	ynVRGMeadvFiKRNGepylGsvWPGpVYyFDFldFAArefWvdEIkrfRd	(449)
BARLEY	TIFVDGLWIDMNEISNFYN--PEFMN--ALDDPPYRINNDCTGRPINNKT	(475)
S. BEET	ilPldGLWIDMNEasNFiteaptPgs--tLdnPPYkINNsggrvPINsKT	(507)
SPINACH	ilFVDGLWIDMNEISNFis--apPpgstLDnPPYkINNsgvm:Pi:NKT	(503)
ARABID.	ilFIDGLWIDMNEISNFit--splssgeeleDFYkINNsgdkRPINNKT	(497)
BARLEY	VRFLAVHYGGVTEYEEHNLFGLEEARATGRGLRDTGRRPFVLSRSIFVG	(523)
S. BEET	ipatAmHYGnvTEYnaHNLyGfLEsqatrealvRpatRqPFLLSRSTFuG	(557)
SPINACH	ipFtAmHYGvipEYnvHNLFGyLEARvTraaliklTekrPFVLSRSIFsG	(553)
ARABID.	VpatsiHfGnisEYdaHNLyGLEAkATHqaVvd:IGKRPFILSRSTFvs	(547)
BARLEY	SGRYTAYWTGDNAATWGDRLYSINTMLSFGLFGMFMICADICGFNGNTTE	(573)
S. BEET	SGkYTAHWTGDNAARWdDLqYSIpTMLnFGLFGFMFMICADICGFaesTTE	(607)
SPINACH	SGkYTAHWTGDNAATWdLqYSIpMldFGLFGIPMvGADICGFICNTTE	(603)
ARABID.	SGkYTAHWTGDNAAKWdLqYSIpjilnFGLFGIPMvGADICGFshdTTE	(597)
BARLEY	ELCGRWICLGAFYFFSRDHSaIFTVRRELYLWFSVAASGRKALGLPYQLL	(625)
S. BEET	ELCGRWICLGAFYFFSRDHSaIdtthqELYLWFSVAASaRtVGLGLYcLL	(657)
SPINACH	ELCGRWICLGAFYFFSRDHS:lGtYqELYLWFSVAASaRkVGLGLPYcLL	(653)
ARABID.	ELCGRWICLGAFYFFSRDHS:lGtArqELYLWdSVAASaRkVGLGLPYcLL	(647)

FIG 2

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BARLEY	PYFYILMYEAHMTGAPIARPLFFSYPHDVATYGVDRQFLGKRGVLVSPVL	(673)
S. BEET	PYYITLMydAnlGSPiARPLfctPdDVATYGssQFLIGRGimVSPVL	(707)
SPINACH	PYFYILMYEAqlnGSPiARPLFFSfPdDikTYGiesQFLLGKGVmVSPVL	(703)
ARABID.	PhlyILMYEAHvsCnPIARPLFFSfPqDtkTYeidSCFLIGKsimVSPaL	(697)
BARLEY	EPGFITVDAYFPAGRWRLYDYSLAVATRTGKHVRLPAPADTVNVHLTGG	(723)
S. BEET	qPGssiVnAYsPrGnWvsLenYtesVsvsaGtyvvsLsAppDhinVHiheG	(757)
SPINACH	kPGVvsvtAYFPPrGnwfdLfDYtreVtasTGryVtLsAppDhinVHiqG	(753)
ARABID.	kqGavaVDAYFPAGnwfdLfnySfAVggdsGKHVRLctPADhVNVHvreg	(747)
BARLEY	TILFLOQSALTTSRARRTAFHLLVALAEDGTASGYLFLDDGDSPEYGR-R	(772)
S. BEET	nIvamQgeAmITqaARsTpFHLLVvmsdhvastGeLFLDnGiemdiGg-p	(906)
SPINACH	nILamQgkAmITqaARKTpFHLLVvmsdcGa6fGeLFLDDGvevtnGvnR	(903)
ARABID.	siIvamQgeALTTrdaARKTpyqLLVvaerleniSGeLFLDDGenlrmGa-g	(796)
BARLEY	S---D-WSMVRFNyKI PNKGAIKVKSEVVHNSYAQSRTLVI SKVVL MGH	(916)
S. BEET	g---gkwtlVRffssegN--nlcisSEVVnrgYAmSqrwVmdKitilG1	(851)
SPINACH	g---k-WtIVkF--iaaaaKqtclitSdVVegefAvSqkwVidKVtilG1	(847)
ARABID.	ggrrD-WtIVkF--rcyvtgkevvlrSEVVnpeYAekmkwaIgKVtfvGf	(843)
BARLEY	R5PAAPKKLTVMVNSAEVEASSSAGTRYQNAGSLGGVAH-IGGLSLVVGE	(867)
S. BEET	krrvkiKeyTVqkdagaikvkglgrrtsshnqGgffVsv-IsdLzqlVGq	(900)
SPINACH	RkgtkingyIVrtgavtrkgdkSk1kstpdrkGefiVAe-IsGLnLllGr	(896)
ARABID.	envenvKtyeVrtserlrspriSliktvscnddprflsvevskLSLlVck	(993)
BARLEY	EFELKV----AMSY	(877)
S. BEET	aFkLelefeGAtrv	(914)
SPINACH	EFkL-----v1h	(903)
ARABID.	kFEEmri----rlt-	(902)

FIG 2

Title: Modified Barley α -Glucosidase
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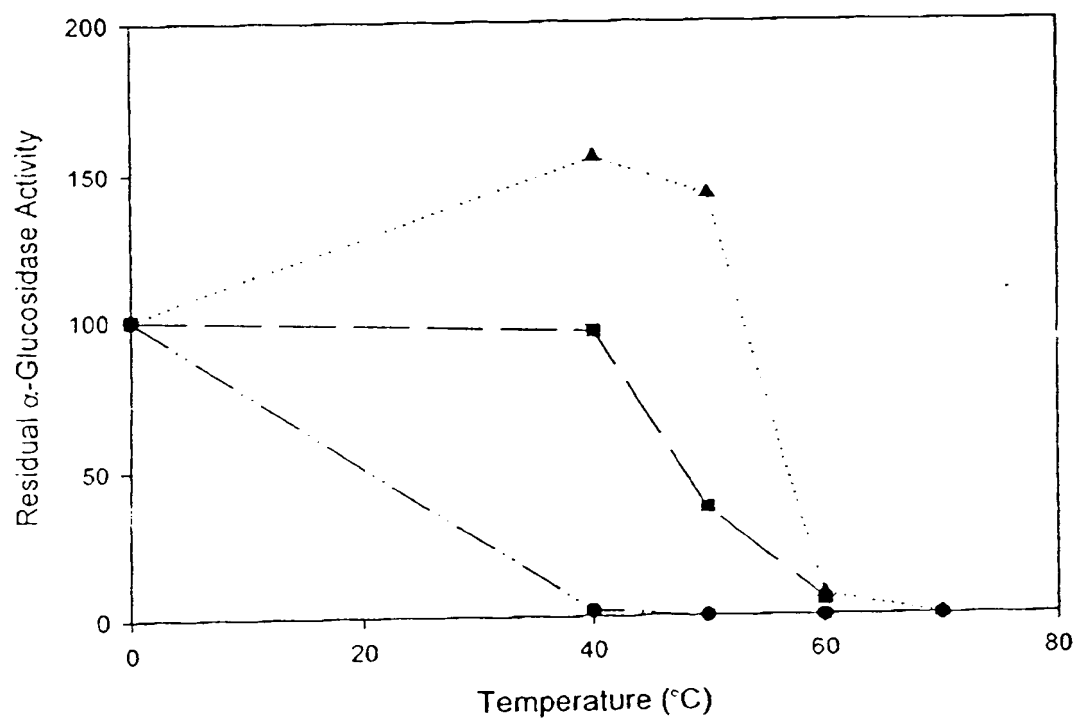


FIG 3

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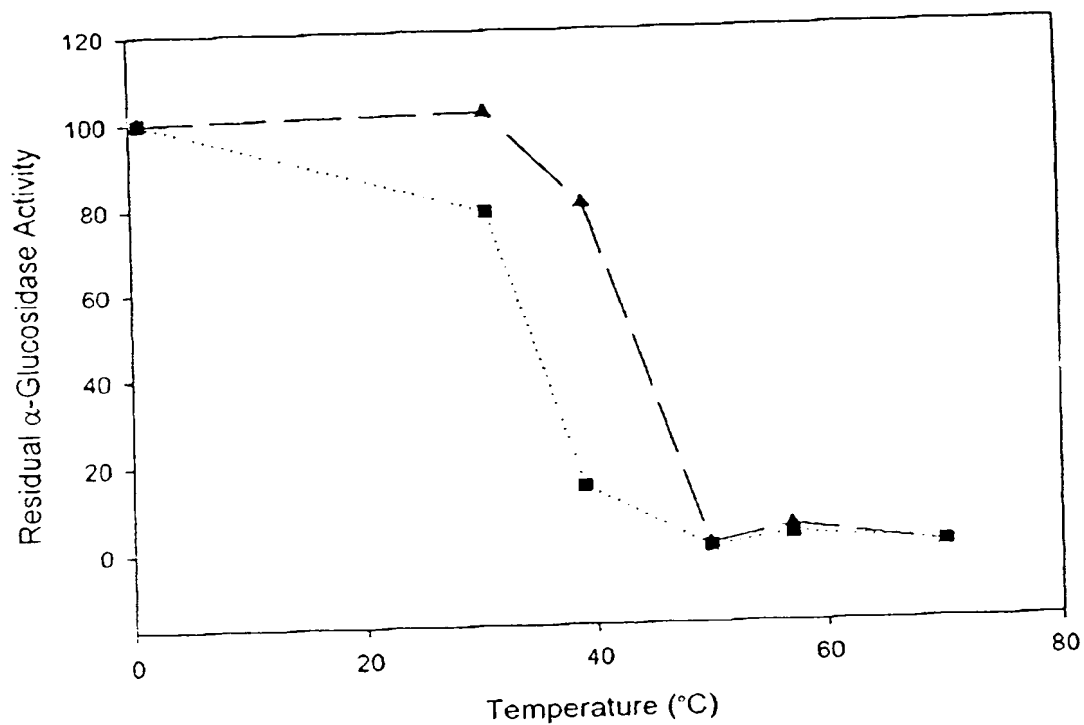


FIG 4

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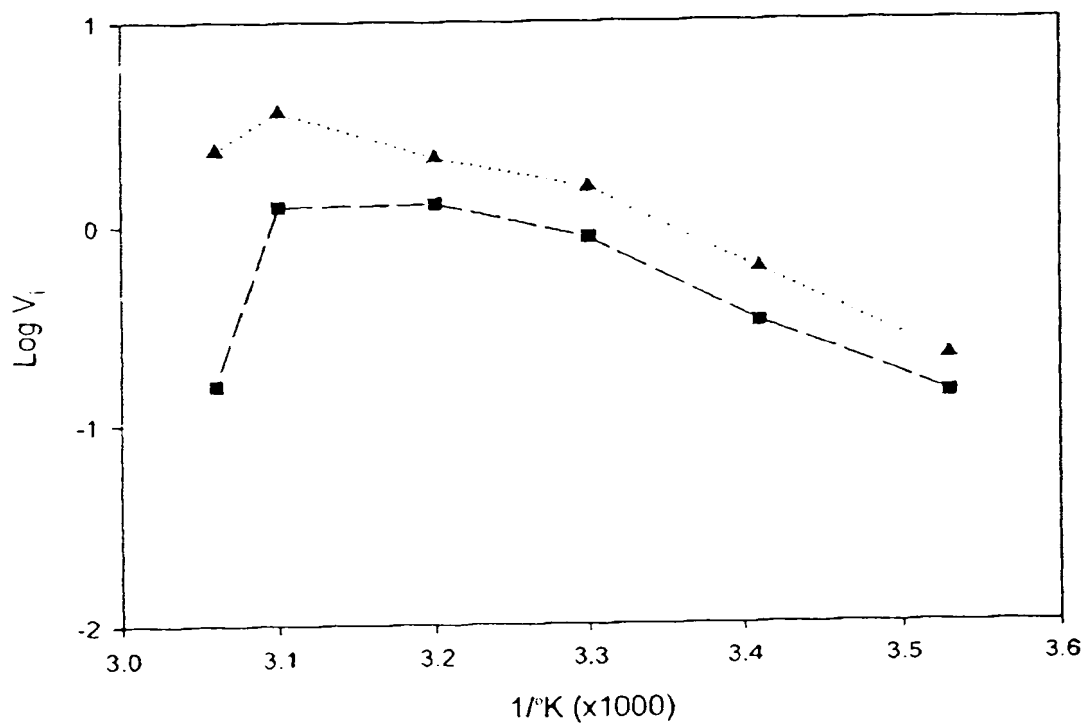


FIG 5